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10/556,832	11/16/2006	Christian Buchler	PD030051	1691

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EXAMINER	
CHU, KIM KWOK	

ART UNIT	PAPER NUMBER
2627	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/556,832	BUCHLER, CHRISTIAN	
	Examiner	Art Unit	
	Kim-Kwok CHU	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Amendment filed on 4/28/2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 November 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Drawings

1. Figures 1A and 2A should be designated by a legend such as --Prior Art-- as described in Applicant's specification, sections 0009 and 0010.

The revised Figs. 1A and 2A as mentioned in Applicant's Remarks dated April 28, 2008 are not found in the submitted amendment.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> *The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.*

3. Claims 2-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

Regarding claim 2, line 21, the specification fails to provide an adequate written description of the subject matter "an evaluation signal".

The claims not specifically mentioned above are rejected because these claims are dependent on the rejected base claims."

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> *The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.*

5. Rejections Under 35 U.S.C. 112, 2nd Paragraph, No Disclosure or Insufficient Disclosure of the Structure, Material, or Acts for Performing the Function Recited in a Claim Limitation Invoking 35 U.S.C. 112, Sixth Paragraph

Regarding Claim 1, claim elements "means for deriving a first error signal", means for deriving a second error signal", means for deriving a first error signal", "means for deriving a land groove detection signal", are means (or step) plus function limitation that invokes 35 U.S.C. 112, sixth paragraph. However, the written description fails to disclose the corresponding structure, material, or acts for the claimed function. That is,

in the specification, the above claimed elements have not assigned to any corresponding structural (circuits) means. For example, the "first error signal" generating means and the "second error signal" generating means are not recognizable based on the specification.

Applicant is required to:

(a) Amend the claim so that the claim limitation will no longer be a means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph; or

(b) Amend the written description of the specification such that it expressly recites what structure, material, or acts perform the claimed function without introducing any new matter (35 U.S.C. 132(a)).

If applicant is of the opinion that the written description of the specification already implicitly or inherently discloses the corresponding structure, material, or acts so that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function, applicant is required to clarify the record by either:

(a) Amending the written description of the specification such that it expressly recites the corresponding structure, material, or acts for performing the claimed function and clearly links or associates the structure, material, or acts to

the claimed function, without introducing any new matter (35 U.S.C. 132(a)); or

(b) Stating on the record what the corresponding structure, material, or acts, which are implicitly or inherently set forth in the written description of the specification, perform the claimed function. For more information, see 37 CFR 1.75(d) and MPEP §§ 608.01(o) and 2181.

6. Claims 2-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 2, the step of “measuring first and second measurement signals” is vague because it is not clear how the signals are obtained and measured.

Regarding Claim 11, the limitations “a firs branch weight” and “a second branch weight” are vague because it is not clear how the signals are obtained and measured under the claimed scanning unit and the photodetector elements.

The claims not specifically mentioned above are rejected because these claims are dependent on the rejected base claims."

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> *A person shall be entitled to a patent unless –*
> *(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

8. Claims 1-6, 10 and 11 are rejected under 35 U.S.C. § 102(b) as being anticipated by Tanaka (U.S. Patent 6,388,963).

9. Tanaka teaches an appliance for reading from and/or writing to optical recording media having all of the following features:

Regarding Claim 1, an appliance for reading from and/or writing to optical recording media 2 (Fig. 1), the appliance comprising: means 675 (Fig. 3) for deriving a first error signal FE only from signals of photodetector segments 672 associated with a main beam SM (Fig. 3); means 675 for deriving a second error signal TE different from the first error signal FE only from signals of photodetector segments 671/673 associated with a secondary beam S1/S2 (Fig. 3); means 675 for deriving a differential focus error signal (components of CTS) from the first error signal FE and the second error signal TE (Fig. 3); and means 675 for forming a land groove detection signal CTS by combining the first error signal FE multiplied by a first branch

weight (+1, -1) with the second error signal TE multiplied by a second branch weight α (Fig. 3).

10. Tanaka teaches a method for generating a track type signal having all of the following steps:

Regarding Claim 2, using a scanning unit (Fig. 1) for an optical recording medium 2 having data stored in tracks (Fig. 8), wherein the scanning unit includes an objective lens 65 (Fig. 2) and a focus control loop 81 (Fig. 1), and is operative to produce a main beam SM (Fig. 3) and at least one secondary beam S1/S2 (Fig. 3) and to evaluate light reflected from the optical recording medium with a plurality of photodetector segments 671-673 (Fig. 3) associated with the main SM beam and the at least one secondary beam S1/S2, the method comprising steps of: deriving a first error signal FE only from the signals of the photodetector segments associated with the main beam SM (Fig. 3); deriving a second error signal TE different from the first error signal FE only from the signals of the photodetector segments associated with the at least one secondary beam S1/S2 (Fig. 3; E, F, G, H signals are detected in addition to A, B, C, D); scanning the optical recording medium 2 with a scanning beam (Fig. 2); deflecting (moving) the objective lens in a focus direction (Fig. 2); measuring first and second measurement

signals (such as FE and TE) which contain, in different proportion, a first component (A, B, C, D in FE) that depends on a distance of the objective lens relative to the optical recording medium and a second component (E, F, G, H in TE) that depends on a position of the scanning beam relative to the tracks on the optical recording medium (Fig. 3); deriving an evaluation signal FE/TE from the first and second measurement signals (Figs. 3 and 8); deriving first and second branch weights from the evaluation signal (Fig. 11); and forming the track type signal (Figs. 8 and 11; TE, TK) by combining the first error signal FE multiplied by the first branch weight (such as +1, -1), with the second error signal TE multiplied by the second branch weight (such as +1, -1 α).

Regarding Claim 3, the focus control loop is switched on (Fig. 1; servo control); the deflecting step comprises feeding a disturbance signal (servo feedback signal) into the focus control loop (Fig. 1; servo feedback during focusing); the measuring step comprises extracting a track error component (E, F, G, H in TE) contained in the first and second error signals and caused by the disturbance signal (FE and TE are affected by the servo control); and the step of deriving the first and second branch weights (such as +1, -1 α) comprises determining the first and second branch weights from the a phase angle and

the an amplitude of the track error component (Fig. 1; normalization and phase compensation).

Regarding Claim 4, a measuring step comprises forming the first measurement signal from the disturbance signal (under feedback servo control; amplifier gain) and forming the second measurement signal TE/CTS (Fig. 3) from the a difference between the first error signal FE and the second error signal TE; and the evaluation signal represents a product of the first and second measurement signals.

Regarding Claim 5, the step of deriving the first and second branch weights comprises one of averaging and integrating the evaluation signal (Fig. 3; digital processing).

Regarding Claim 6, the deflecting step comprises moving it the objective lens towards the optical recording medium with the focus control loop open (Fig. 2).

Regarding Claim 10, those signals involved in the method that are based on a plurality of individual signals are normalized relative to a sum of the individual signals (Fig. 1; normalization processing in control processor 8).

11. Tanaka teaches an apparatus having all of the following elements and means:

Regarding Claim 11, a scanning unit (Fig. 2) for an optical recording medium 2 having data stored in tracks, the scanning unit being operative to produce a main beam SM and at least one secondary beam S1/S2 (Fig. 3); a plurality of photodetector elements 671-673 (Fig. 3) operative to evaluate light reflected from the optical recording medium 2; and wherein: a first error signal FE is derived only from signals of the photodetector elements 672 associated with the main beam (Fig. 3); a second error signal TE different from the first error signal FE is derived only from signals of the photodetector elements 671, 673 associated with the at least one secondary beam S1/S2; a differential focus error signal (signals in forming CTS) is derived from the first error signal and the second error signal (Fig. 3); and a land groove detection signal CTS is derived by combining the first error signal multiplied by a first branch weight with the second error signal TE multiplied by a second branch weight (Fig. 3).

Allowable Subject Matter

12. Claims 7-9 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

13. The following is an Examiner's statement of reasons for the indication of allowable subject matter:

As in claim 7, the prior art of record fails to teach or fairly suggest an information recording carrier having following features: the first measurement signal is formed from the first error signal FE and the second measurement signal TE is formed from the second error signal; the amplitudes of the first and second measurement signals are —used to derive the evaluation signal (Figs. 4 and 5); and the first and second branch weights are calculated from the amplitudes of the first and second measurement signals such that the a difference between the first and second error signals multiplied by the first and second branch weights disappears.

As in claim 8, the prior art of record fails to teach or fairly suggest an information recording carrier having following features: the first measurement signal is formed from the first error signal multiplied by the first branch weight; the second

measurement signal is formed from the second error signal multiplied by the second branch weight; the amplitudes of the first and second measurement signals are used to derive the evaluation signal; and the step of deriving the first and second branch weights comprises changing the first and second branch weights in at least one adjustment step if there is any difference between the amplitudes of the first and second measurement signals such that the difference between the amplitudes is reduced.

The features indicated above, in combination with the other elements of the claims, are not anticipated by, nor made obvious over, the prior art of record.

Response to Remarks

14. Applicant's Remarks filed on April 28, 2009 have been fully considered.

Applicant amends Claims 1-11 and the reference of Tanaka listed in last Office Action is cited as a prior art because it teaches all elements and steps in the amended Claims 1-6, 10 and 11.

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kim CHU whose telephone number is (571) 272-7585 between 9:30 am to 6:00 pm, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen, can be reached on (571) 272-7579.

The fax number for the organization where this application or proceeding is assigned is (571) 273-8300

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished application is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9191 (toll free).

/Kim-Kwok CHU/
Examiner AU2627
July 14, 2009
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/HOA T NGUYEN/

Supervisory Patent Examiner, Art Unit 2627